Notice of Allowability	Application No.	Applicant(s)	
	09/857,685	ZIAKOVIC ET AL.	
	Examiner	Art Unit	
	Kandasamy Thangavelu	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *March 23, 2005*.

2. ☒ The allowed claim(s) is/are *1-30*.

3. ☒ The drawings filed on *07 June 2001* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date March 23, 2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER

DETAILED ACTION

Introduction

1. This communication is in response to the Applicants' communication dated March 23, 2005. Claims 1-30 of the application are pending.

Drawings

2. The drawings submitted on June 7, 2001 are accepted.

Information Disclosure Statement

3. Acknowledgment is made of the information disclosure statement filed on March 23, 2005 together with copies of the papers. The patents and papers have been considered.

Reasons for Allowance

4. Claims 1-30 of the application are allowed over prior art of record.

5. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

The closest prior art of record shows:

(1) an apparatus and method for visualizing the shape formed by assembling sewing patterns using a three-dimensional image display method; the original sewing patterns are saved in a CAD system database and the database is searched for the selected patterns to assemble the specified shape; three-dimensional coordinates indicating a shape of a dress and main dimensions of a shape formed by assembling sewing patterns on the dress form are input to a processor; to generate a three-dimensional image of the shape formed by assembling the sewing patterns, a reference dummy is used; the three-dimensional coordinates indicating the shape formed by assembling the sewing patterns according to the inputted three-dimensional coordinates are calculated by the processor; a two-dimensional projection image is generated by the processor from the calculated three-dimensional coordinate values; the generated two-dimensional projection image of the shape formed by assembling the sewing patterns is displayed on a display screen (**Matsuura,** U. S. Patent 5,615,318);

(2) a method and a system for generating planar maps of three-dimensional surfaces by flattening the three-dimensional surface into a two-dimensional image; a 3-D surface data is received, a 3-D surface boundary is defined, and a planar map generated based on the 3-D surface; an edge and angle proportional mapping is used to map the surface boundary to a map boundary; those surface vertices not forming the surface boundary are relaxed to create map vertices not forming the map boundary; the user selectively adjusts the balance between discontinuity and distortion in the planar map; each point o the 3-D map corresponds to a unique point on the planar map; operations may be performed on the simpler 2-D planar map and the results of the operation mapped on to the 3-D surface; the user maintains a high degree of control

over the mapping process; user selected map vertices may be pinned onto a user selected location and held fixed while conventional relaxation technique is used (**Liepa,** U. S. Patent 6,232,980);

(3) application of CAD in manufacture of garments; creation of an image of a garment design and its visualization using CAD; the garment design system includes a CAD design interface, a pattern flattening module and an accurate drape engine; the initial design is specified in a 3-Dspecification; a 2-D pattern is derived from the 3-D specification; the pattern flattening process accurately conforms to the 3-D surface; the garment specification is partitioned into fit and drape areas; the offset between the garment and the underlying mannequin is specified; the fitted areas are flattened differently from the draped areas; the drape engine uses information on geometric description of the 2-D pattern, fabric material characteristics, constraining mechanisms, mannequin surface description and surface texture description to produce accurate prediction of the final shape; a simulation model is used to predict the energy used to maintain pattern in certain geometric configuration ; changes to the geometric shape of the fabric is made to cause reduction in energy (**McCartney et al.,** "Modeling garments in 3D CAD", School of Mechanical and Manufacturing Engineering, The Queen's University of Belfast, UK, 1991); and

(4) a method of combining fabric characteristics models with individual subject models using various garment configurations and displaying a 3-D image of the garment as worn by the individual; digitized photographs of the individual are mapped over a 3-D image tailored to the individual's dimensions; garment models are placed over the 3- D images; the fit of the garment is matched to the 3-D model and shown graphically on the computer display device; after the user is satisfied with the garment design, it is stored in a computer memory; it is then used to set

control outputs to an automated cutting machine to cut the required garment's pieces to make the accurately tailored garment (**Beavin,** U.S. Patent 5,495,568).

5.1 Applicants' first set of claims consists of Claims 1-20.

Independent Claim 1 is directed to a method of viewing a garment made up of garment pieces, represented by data stored in a memory of a computer. The claim identifies the uniquely distinct features of:

"relaxing each garment piece from its position on the surface of the dummy model to its equilibrium position on the dummy model".

Because the closest prior art fails to teach or fairly suggest relaxing each garment piece from its position on the surface of the dummy model to its equilibrium position on the dummy model, as claimed by the Applicants, Claims 1-20 are deemed novel and allowable.

5.2 Applicants' second set of claims consists of Claim 21.

Independent Claim 21 is directed to a method of making garment pieces. The claim identifies the uniquely distinct features of:

"relaxing each garment piece from its position on the surface of the dummy model to its equilibrium position on the dummy model".

Because the closest prior art fails to teach or fairly suggest relaxing each garment piece from its position on the surface of the dummy model to its equilibrium position on the dummy model, as claimed by the Applicants, Claim 12 is deemed novel and allowable.

5.3 Applicants' third set of claims consists of Claims 22-27.

Independent Claim 22 is directed to an apparatus for viewing garment pieces on a dummy model having a surface. The claim identifies the uniquely distinct features of:

"computer means for relaxing the pieces of the garment from their position on the surface of the dummy model to their equilibrium position on the dummy model".

Because the closest prior art fails to teach or fairly suggest computer means for relaxing the pieces of the garment from their position on the surface of the dummy model to their equilibrium position on the dummy model, as claimed by the Applicants, Claims 22-27 are deemed novel and allowable.

5.4 Applicants' fourth set of claims consists of Claims 28-30.

Independent Claim 28 is directed to an apparatus for making garment pieces. The claim identifies the uniquely distinct features of:

"computer means for relaxing the pieces of the garment from their position on the surface of the dummy model to their equilibrium position on the dummy model".

Because the closest prior art fails to teach or fairly suggest computer means for relaxing the pieces of the garment from their position on the surface of the dummy model to their equilibrium position on the dummy model, as claimed by the Applicants, as claimed by the Applicants, Claims 28-30 are deemed novel and allowable.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on 571-272-3716. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

K. Thangavelu
Art Unit 2123
May 24, 2005